

1 WHAT IS CLAIMED IS:

2 1. A roller shade cutting machine comprising:

3 a base having a top and a bottom;

4 a track assembly mounted on the top of the base and comprising

5 a stationary track mounted vertically on the top of the base and

6 having a top end and a bottom end fastened on the top of the base;

7 an adjustable track slidably mounted on the stationary track and

8 comprising an adjustable bar with a top end, a bottom end and a front slidably

9 mounted on the stationary track, a top shade holder attached at the top end of the

10 adjustable bar and having a rolling holder, and a ruler attached to the front the

11 adjustable bar; and

12 an indicating device mounted on the stationary track to indicate

13 a scale of the ruler and interlock the adjustable bar with the stationary track in

14 position;

15 a slat cutting device mounted on the stationary track;

16 a shade holder mounted on the stationary track and comprising

17 a stationary base fastened on the stationary track and having a

18 longitudinal through hole; and

19 a chuck rotatably mounted in the longitudinal through hole of

20 the stationary base and comprising

21 a turning table rotatably mounted in the longitudinal

22 through hole of the stationary base and having a top, a bottom, a central through

23 hole with a center defined through the top and the bottom of the turning table and

24 aligned with the rolling holder; and

1 a clamping device mounted on the top of the turning
2 table and having a first jaw and a second jaw that are self-centering toward the
3 center of the central through hole of the turning table;

4 a shade cutting device mounted on the stationary track below the
5 stationary base of the shade holder and comprising

6 a cutter mounting frame fastened on the stationary track and
7 having a top;

8 a cutter stationary block mounted on the top of the cutter
9 mounting frame and having a top;

10 a cutter sliding block slidably mounted on the top of the cutter
11 stationary block and having a top;

12 a cutting blade demountably mounted on the top of the cutter
13 sliding block at a position being a datum for the ruler; and

14 a cutting handle connected to the cutting sliding block to move
15 the cutting blade to cut; and

16 a power assembly mounted on the stationary track to spin the turning
17 table.

18 2. The roller shade cutting machine as claimed in claim 1, wherein
19 the turning table further has an outside knob holder formed from the top
20 of the turning table; and

21 the clamping device further comprises

22 a movable base slidably mounted on the top of the turning table
23 and having a top, a slot defined through the top and corresponding to the central
24 through hole of the turning table and an inside knob holder mounted on the top of

1 the movable base, being parallel to the outside knob holder and having a
2 transverse threaded hole; and
3 an adjusting device rotatably mounted on the outside knob
4 holder and the inside knob holder;
5 wherein the first jaw is slidably in the slot of the movable base, the
6 second jaw is fastened on the movable base and is parallel to the first jaw and the
7 adjusting device connects to both the first jaw and the movable base to move the
8 jaws toward the center of the central through hole of the turning table.
9 3. The roller shade cutting machine as claimed in claim 2, wherein the
10 adjusting device comprises
11 a threaded external shank with an exterior thread screwed into the
12 transverse threaded hole of the inside knob holder and having an inside end
13 rotatably held in the outside knob holder, an outside end and a longitudinal
14 threaded hole with an interior thread defined in the outside end;
15 a threaded internal shank with an exterior thread screwed in the
16 longitudinal threaded hole of the threaded external shank and having an outside
17 end connecting to the first jaw; and
18 a clamping knob rotatably mounted in the outside knob holder and
19 attached to the inside end of the threaded external shank to rotate the threaded
20 external shank;
21 wherein the exterior thread of the threaded external shank is counter to
22 the exterior thread of the threaded internal shank.
23 4. The roller shade cutting machine as claimed in claim 1, wherein
24 the cutter mounting frame of the shade cutting device further has a side;

1 the cutter sliding block of the shade cutting device further has a bottom
2 and a rectangular recess defined in the bottom, and the rectangular recess has
3 four edges;
4 the shade cutting device further comprises
5 a side cover attached to the side of the cutter mounting frame
6 and having a handle slot; and
7 a feeding disk rotatably mounted in the rectangular recess in the
8 cutter sliding block and having an eccentric portion selectively abutting three of
9 the edges of the rectangular recess; and
10 the cutting handle comprises
11 a connecting bar having an inside end eccentrically connected to
12 the feeding disk to form the eccentric portion and an outside end extended
13 through the handle slot; and
14 a safety handle sleeve retractably mounted on the outside end of
15 the connecting bar and engaged with the handle slot to hold the cutting handle in
16 position.

17 5. The roller shade cutting machine as claimed in claim 3, wherein
18 the cutter mounting frame of the shade cutting device further has a side;
19 the cutter sliding block of the shade cutting device further has a bottom
20 and a rectangular recess defined in the bottom, and the rectangular recess has
21 four edges;
22 the shade cutting device further comprises
23 a side cover attached to the side of the cutter mounting frame
24 and having a handle slot; and

1 a feeding disk rotatably mounted in the rectangular recess in the
2 cutter sliding block and having an eccentric portion selectively abutting three of
3 the edges of the rectangular recess; and

4 the cutting handle comprises

5 a connecting bar having an inside end eccentrically connected to
6 the feeding disk to form the eccentric portion and an outside end extended
7 through the handle slot; and

8 a safety handle sleeve retractably mounted on the outside end of
9 the connecting bar and engaged with the handle slot to hold the cutting handle in
10 position.

11 6. The roller shade cutting machine as claimed in claim 1, wherein the
12 chuck further comprises a driven pulley wheel mounted on the bottom of the
13 turning table; and

14 the power assembly comprises

15 a control box mounted on the stationary track;

16 an actuator electrically connected to the control box;

17 a drive pulley wheel rotated by the actuator; and

18 a pulley belt connecting the drive pulley wheel to the driven pulley
19 wheel to transmit power outputted by the actuator to spin the chuck.

20 7. The roller shade cutting machine as claimed in claim 5, wherein the
21 chuck further comprises a driven pulley wheel mounted on the bottom of the
22 turning table; and

23 the power assembly comprises

24 a control box mounted on the stationary track;

1 an actuator electrically connected to the control box;
2 a drive pulley wheel rotated by the actuator; and
3 a pulley belt connecting the drive pulley wheel to the driven pulley
4 wheel to transmit power outputted by the actuator to spin the chuck.

5 8. The roller shade cutting machine as claimed in claim 1, wherein the
6 slat cutting device comprises

7 a mounting bracket fastened on the stationary track and having two
8 parallel wings protruded toward the front of the adjustable bar, each of the wings
9 having a distal end;

10 a slat guiding block mounted on the mounting bracket between the
11 wings and having a longitudinal through hole and a curved bottom;

12 a rolling cutter rotatably mounted on the wings and having an exterior
13 periphery being flush with the curved bottom of the slat guiding block and a
14 cutting recess defined in the exterior periphery and aligned with the longitudinal
15 through hole of the slat guiding block;

16 a handle connected to the rolling cutter outside the wings to rotate the
17 rolling cutter; and

18 a transparent cover attached to the distal ends of the wings and having
19 two parallel basis lines respectively formed above and below the curved bottom
20 of the slat guiding block.

21 9. The roller shade cutting machine as claimed in claim 7, wherein the
22 slat cutting device comprises

23 a mounting bracket fastened on the stationary track and having two
24 parallel wings protruded toward the front of the adjustable bar, each of the wings

1 having a distal end;
2 a slat guiding block mounted on the mounting bracket between the
3 wings and having a longitudinal through hole and a curved bottom;
4 a rolling cutter rotatably mounted on the wings and having an exterior
5 periphery being flush with the curved bottom of the slat guiding block and a
6 cutting recess defined in the exterior periphery and aligned with the longitudinal
7 through hole of the slat guiding block;
8 a handle connected to the rolling cutter outside the wings to rotate the
9 rolling cutter; and
10 a transparent cover attached to the distal ends of the wings and having
11 two parallel basis lines respectively formed above and below the curved bottom
12 of the slat guiding block.

13 10. The roller shade cutting machine as claimed in claim 1, wherein the
14 stationary track further has an inner space; and
15 the track assembly further comprises a balancing pulley assembly
16 mounted in the stationary track, and the balancing pulley assembly comprising
17 a pulley mounted at the top end of the stationary track;
18 a cord partially rolling on the pulley and having an outside end
19 connected to the bottom end of the adjustable bar and an inside end extended into
20 the inner space of the stationary track; and
21 a balancing weight connected to the inside end of the cord and movably
22 mounted in the inner space of the stationary track to provide a balanced state of
23 the adjustable bar.

24 11. The roller shade cutting machine as claimed in claim 9, wherein the

1 stationary track further has an inner space; and
2 the track assembly further comprises a balancing pulley assembly
3 mounted in the stationary track, and the balancing pulley assembly comprising
4 a pulley mounted at the top end of the stationary track;
5 a cord partially rolling on the pulley and having an outside end
6 connected to the bottom end of the adjustable bar and an inside end extended into
7 the inner space of the stationary track; and
8 a balancing weight connected to the inside end of the cord and movably
9 mounted in the inner space of the stationary track to provide a balanced state of
10 the adjustable bar.